User manual

Evolution™
LI156Ex

Hill-Rom
A HILLENBRAND INDUSTRY

QD1532A
Rev002

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PLEASE NOTE

Persons depicted in the illustrations may be shown working in non-standard working postures in certain situations, for reasons of clarity and visibility.

Not all the photographs used in this manual are contractually binding.

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USE OF EVOLUTION LI156Ex BEDS

The EVOLUTION line of hospital beds includes acute care beds (with mandatory Reverse Trendelenburg tilting) and general-purpose variable height hospital beds for general care, for use in intensive or post-operative care, in ICUs and General Medicine Wards. They can be used both for intensive and non-intensive care and with the highly elaborate techniques developed in special medical units. They are designed with the needs of the whole medical team in mind and facilitate the use of ICU and monitoring equipment and the transfer of patients to examination wards.

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0. INTRODUCING YOUR MODEL

Version LI156Ex			
Sleep surface dimensions		90 x 200 cm	■
Frame	Laminated Hard surface	Yes	■
Electrical function lock-out		Yes	■
Adjustable bed-height		Yes	■
Adjustable head Section	Head Section “CPR” Comfort adjustment	Yes Yes	■ ■
Adjustable knee section	Power-driven with Auto-contour	Yes	■
Adjustable leg section	Mechanical	Yes	■
Integral siderails		Yes	■
Central brake and steer system		Yes	■
Castors	Ø 150 Single band castors		□

OPTIONS		
Trendelenburg / Reverse Trendelenburg *(mandatory for acute care)*		□
Integral bed extension		□
Integral linen holder		□
Additional control connections		□
Bilateral variable height foot pedal		□
Battery-driven operation		□
Cover for lock-out unit		□
Castors	Ø 150 Double band castors Ø 150 Antistatic double band castors Ø 150 Antistatic single band castors Ø 150 Complete castors Ø 150 Antistatic complete castors	□ □ □ □ □
Directional castor at foot end of bed		□
Bedside cabinet transport		□

ACCESSORIES

AC907A : Raised urine holder
AC908A : 2 receptacle bottle holder
AC923A : Label holder
AC930A : Removable frame
AC932A : 3P 1L pivoting stainless steel bottle holder
AC938A : 3P 1L pivoting stainless steel bottle holder
AC953A : Chrome-plated I.V. hook
AC959A : Oxygen cylinder holder
AC961A : 3-litre bottle holder for frame
AC962A : 3-litre bottle holder for foot end
AC963A : Syringe-driver holder
AC967A : Monitor stand
AC968A : Equipotential cable
AC991A : Triangular section drainage holder
AC992A : Mattress for bedframe extension
AD016A : Semi-spherical drainage holder
AD080B : Chrome-plated patient helper
AD081C : Chrome-plated adjustable patient helper
AD082A : Stainless steel I.V. pole
AD083A* : Head-end tray
AD098A : Variable Height Electric pedal
AD090A : 3rd control connection
AD091A : 3rd control
AD113A : Siderail protective cover
AD165A : I.V. pole

* Incompatible with the bedside cabinet transport option

1. SYMBOLS

1.1 GENERAL SYMBOLS

Safety instructions:
Please read carefully

DO NOT BIN
Follow recycling procedure

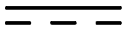
DO NOT PLACE ANYTHING
on this surface

Safety earth

Equipotential terminal

Class II device

Type B equipment



Direct current

Alternating current

1.2 FUNCTION SYMBOLS

1.2.1 Manual controls

The following labels located next to the relevant control identify manual operations.

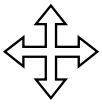
Head Section “CPR”

Trendelenburg/Reverse Trendelenburg (option)

Adjustable Leg section

1.2.2 Brake and steer controls

Steer



Neutral

Brake

1.2.3 Angle control

1.2.3.1 Bed without Bedside Cabinet Transport option

Reverse Trendelenburg availability area

Head Section

Knee Section

1.2.3.2 Bed with Bedside Cabinet Transport option

Rev. Trend. and Bedside Cabinet Transport availability area

Head Section

Knee Section

1.2.4 Electrical functions

Nurse controls

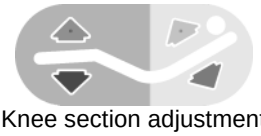
Height adjustment

Head sect. adjustment

Knee sect. adjustment

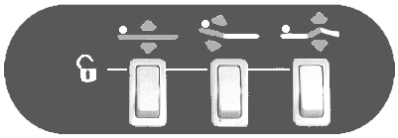
Patient controls

Head Section adjustment

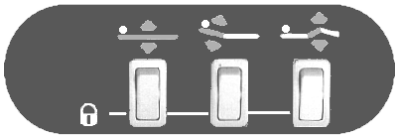


Knee section adjustment

Lock-out panels



Electrical functions released



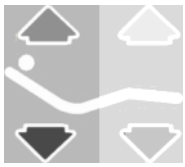
Electrical functions locked out

Variable Height bilateral pedal (optional)
(accessory ref. AD098A)

Down

Up

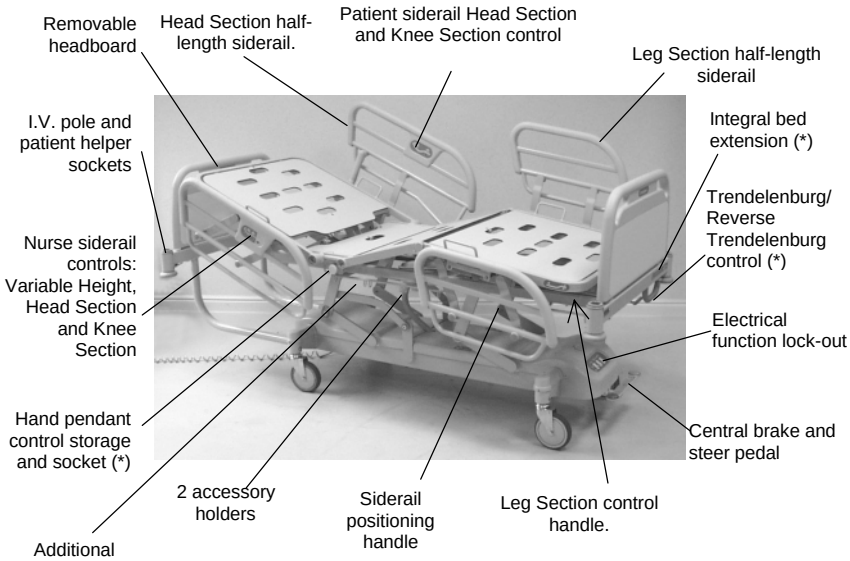
Hand pendant control (accessory ref. AD091A)

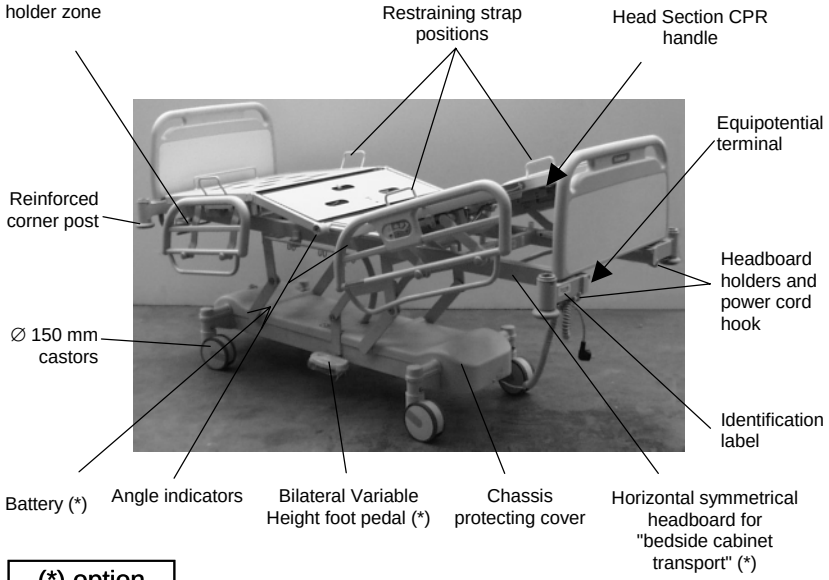


Head Section adjustment – Auto-contour

Knee Section adjustment

2. OVERVIEW


Removable headboard
Head Section half-length siderail.
Patient siderail Head Section and Knee Section control
Leg Section half-length siderail
I.V. pole and patient helper sockets
Integral bed extension (*)
Trendelenburg/ Reverse Trendelenburg control (*)
Nurse siderail controls: Variable Height, Head Section and Knee Section
Electrical function lock-out
Hand pendant control storage and socket (*)
Central brake and steer pedal
2 accessory holders
Siderail positioning handle
Leg Section control handle.
Additional accessory holder zone



(*) option

3. INSTALLING THE BED

3.1 FIRST STEPS

Before using the bed, it is essential to have a thorough understanding of this manual. It contains instructions for general use and maintenance and gives you the assurance of improved safety.

Nursing staff must be informed of the risks encountered in the use of electric beds.

The many sources and types of accessories, hardware or medical devices that may be used jointly with this bed do not enable Hill-Rom to guarantee both the safety and conformity of all the combinations thus created. The operator who creates these device combinations must therefore ensure that security and conformity requirements are met.

Before installing the bed for the first time or after bringing the bed and its accessories out of storage:

- Ensure that the bed and its various parts are at room temperature
- Connect the bed to the mains power supply (see sect. 3.2 below)
- Ensure that all the moving parts are in good working order
- Ensure that the bed has been cleaned and disinfected (see chapter 6).

3.2 CONNECTION TO THE MAINS POWER SUPPLY

The mains power supply for the bed must comply with French standards NF C 15-100 et NF C 15-211 (230V power point + earth) (France) and CEI 364 for other destinations.

Check that the power supply of the bed (identification label – sect. 2) corresponds to the power supply voltage of the hospital.

The power supply should be equipped with a maximum 30 mA earth leakage circuit breaker, in compliance with CEI 364-5-53.

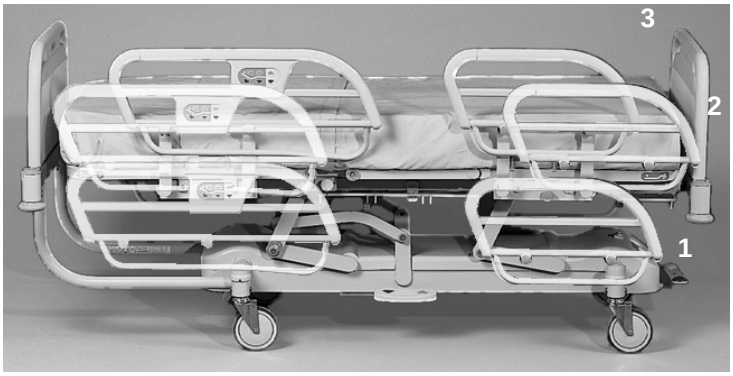
4. INSTRUCTIONS FOR USE

4.1 SIDERAILS

The siderails are part of the frame. They rotate into position by moving towards the head and foot of the bed in two stages (intermediate and fully raised). When the siderails are lowered, the width of the bed is reduced.

When fully raised, the rails ensure patient protection and reduce the risk of falls.

In the intermediate position, the rails can help a fully mobile patient get in and out of bed safely and comfortably.



Nursing staff must decide which rail position is best suited to the patient's condition. With patients suffering from obsessive behavioural disorders, for instance, it may be better to leave:
- the head section rails fully raised
- the leg section rails in either an intermediate position or lowered.
The Head Section rails should not be used in intermediate position if the Head Section is raised by more than 30°.

Always ensure that there are no obstacles (patient's limbs, objects, accessories, etc.) before raising or lowering a siderail.

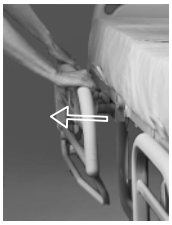
4.1.1 Raising a siderail

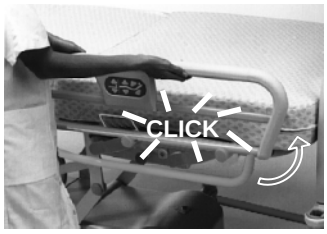
The siderails are located under the bed when not in use.

To raise a siderail:

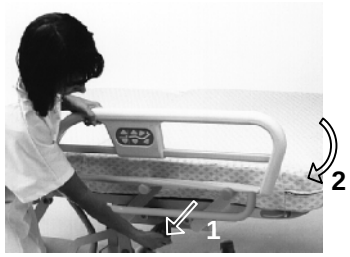
- Pull the rail out from under the bed until fully extended
- Rotate the rail upwards into the required position (intermediate or fully raised).

Ensure that the siderail has clicked into position.



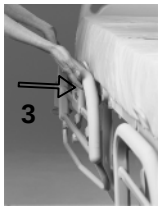


4.1.2 Lowering a siderail



To lower a siderail:

- Hold the rounded end of rail firmly
- Pull the beige-coloured lever located on the rail base
- Rotate the rail downward into the required position (intermediate or low)
- Release the lever
- When the rail is fully lowered, push it back into position under the bed.



4.2 ELECTRICAL FUNCTIONS

The power-driven features of the bed are controlled by panels located on the inner and outer sides of the Head Section siderails (patient controls and nurse controls respectively), by a bilateral variable height foot pedal (optional) or by a hand-held unit (accessory).

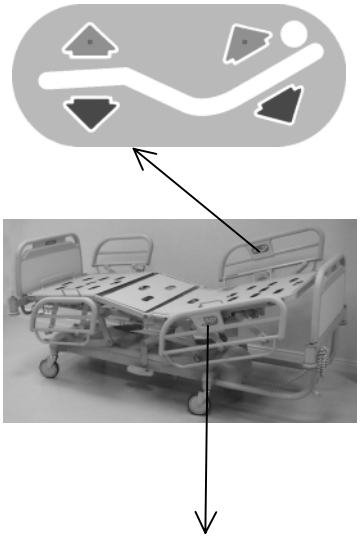
4.2.1 Controls

4.2.1.1 Patient controls

Patients can use the controls located on the inner side of the Head Section rails to adjust:

- Head Section inclination and Auto-contour if available (see sect. 4.3)
- Knee Section Inclination.

PLEASE NOTE: *The patient does not have access to the bed height adjustment control.*



4.2.1.2 Nurse controls

Nursing staff can use the controls located on the outer side of the Head Section rails to adjust:

- Bed height
- Head Section Inclination and auto-contour if available (see sect. 4.3)
- Knee Section Inclination.

PLEASE NOTE: *Use of the nurse controls is reserved for nursing staff only.*

4.2.1.3 Control identification

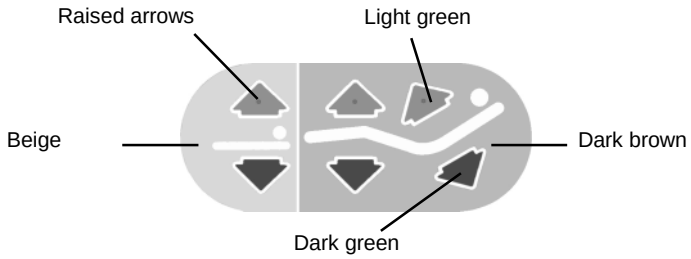
Controls are identified in several ways:

By colour:

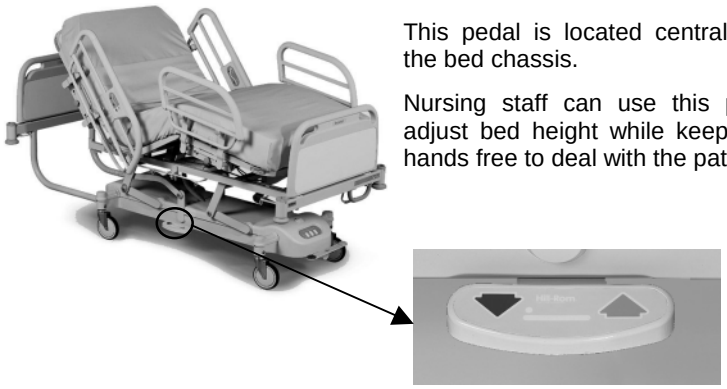
- Light green arrow: Up
- Dark green arrow: Down
- Light brown (background): Patient controls
- Beige (background): Nurse controls.

By embossment:

- Raised arrows (only for upward movements and on the siderail controls).



4.2.2 Bilateral variable height foot pedal (optional).



This pedal is located centrally under the bed chassis.

Nursing staff can use this pedal to adjust bed height while keeping their hands free to deal with the patient.

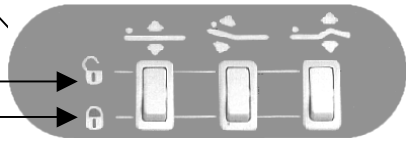
Do not fit accessory AD011A to a LI156Dx or LI156Ex bed (see identification label) that features this option. This accessory may trap or damage the pedal and result in uncontrolled (undesirable) movements.

4.3 ELECTRICAL FUNCTION LOCK-OUT

See Safety – General precautions for use, section 7.1

The electrical function lock-out panel can be used to lock out or to release the three power-driven functions either singly or simultaneously.

Once a function is locked out, it can no longer be operated using the siderail controls, variable height pedal or hand pendant control.



Controls released
Controls locked out

To lock out an electrical function:

- Switch the relevant control switch to lock: .

To release an electrical function:

- Switch the relevant control switch to unlock: .

IMPORTANT: *Locking out the Knee Section adjustment control will also lock out the Auto-contour feature (see sect. 4.5.3.).*

Locking out the height adjustment control will also lock out the Reverse Trendelenburg option when the bed is in a raised position.

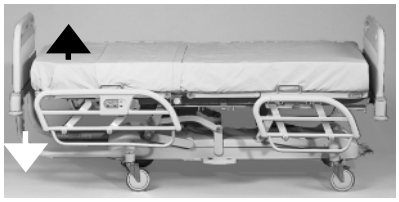
Locking out the Head Section does not lock out the Auto-contour Knee Section.

When the patient is restrained by the straps, the electrical functions must be locked out.

4.4 SLEEP SURFACE

4.4.1 Power-driven variable height adjustment

or



Sleep surface height can be adjusted using the nurse controls, the hand pendant control or the bilateral foot pedal (optional).

Always ensure that there are no objects or children under the bed before operating the sleep surface height adjustment control.

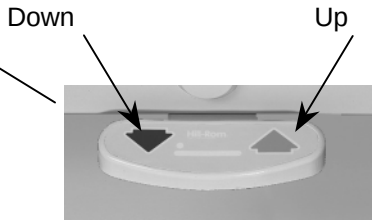
- ***Make sure that the bed and accessories (patient helper, I.V. pole, etc.) cannot strike any fittings (light fittings, service shafts, etc.).***
- ***Make sure that the patient's arms and legs do not jut out from the sleep surface.***

4.4.2 Variable Height bilateral pedal (option).

This pedal is located centrally under the bed chassis.

Adjust the height of the sleep surface by:

- pressing your foot on the corresponding control arrow.



The Variable Height pedal uses the same colours as for the siderail controls (see section 4.2.1.3).

Do not fit accessory AD011A to a LI156Dx or LI156Ex bed (see identification label) that features this option. This accessory may trap or damage the pedal and result in uncontrolled (undesirable) movements.

4.4.3 Trendelenburg/Reverse Trendelenburg (Optional)

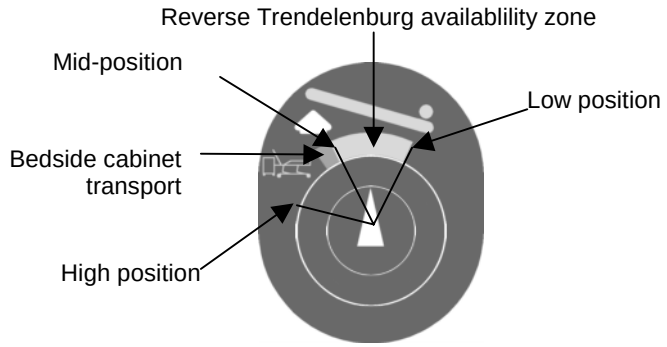
(mandatory for acute care)

The sleep surface may be tilted towards the head of the bed (Trendelenburg tilt) or towards the foot of the bed (Reverse Trendelenburg tilt). Positions may be indexed and pegged. Maximum tilt can be obtained when the sleep surface is positioned within the limits found in the table on the next page.

To tilt the sleep surface:

- For the Bedside Cabinet Transport option, release the brakes, move the bed away from the wall, then apply the brakes
- Unlock the safety catch by pulling the lever located behind the footboard handle
- Tilt the sleep surface in the position required
- Release the safety catch lever
- Hold the bed by the footboard rail and tilt slightly until it locks into position (a click is heard).

***NOTE**: Nursing staff are advised to keep the bed at mid-height when moving patients: Trendelenburg/Reverse Trendelenburg tilting will then remain possible even in the event of power failure or of the battery being flat.*
Reverse Trendelenburg tilting is possible in the absence of a power supply when the bed is positioned between low and mid-height (manual operation as indicated on the yellow label located on the elevator arm.



Trendelenburg/Reverse Trendelenburg with or without power supply (mains or battery)

	Bed position: high	Bed position: low	Bed position: mid-height
Power on	Trendelenburg / Reverse Trendelenburg possible	Raise bed to use Trendelenburg / Reverse Trendelenburg tilting	Trendelenburg / Reverse Trendelenburg possible
Power off (mains and battery)	Trendelenburg possible	Reverse Trendelenburg possible	Trendelenburg / Reverse Trendelenburg possible

* Raise the bed to obtain the possibility of Trendelenburg

Before using this feature, always ensure:

- ***That the bed extension (optional) is secured***
- ***That there are no objects or children under the bed.***

If the sleep surface is not flat and the patient is heavy or the bed has an air or water mattress, this operation should be carried out by two people.

- ***Make sure that the bed and accessories (patient helper, I.V. pole, etc.) cannot strike any fittings (light fittings, service shafts, etc.).***
- ***Make sure that the patient's arms and legs do not jut out from the sleep surface.***
- ***The Trendelenburg/Reverse Trendelenburg function cannot be used when transporting a bedside cabinet on the bed. The nursing staff must ensure that the physiological state of the patient is compatible with these movements.***

4.5 HEAD SECTION

Ensure that there are no obstacles (patient's limbs, power cables, objects or accessories) before using this feature.

4.5.1 CPR release

The Head Section CPR release is activated by disabling the adjustment drive in CPR emergency situations. The release is cushioned.

Use the two handles located under the Head Section behind each symbol to operate the CPR release.

To lower the Head Section:

- Release the Head Section by pulling the CPR handle with one hand
- Control the descent of the Head Section using your other hand as necessary

***NOTE**: Due to the dampened motion and depending on the weight or position of the patient, it may be necessary to initially push down on the head section.*

- Release the handle when the Head Section is horizontal.

The Head Section power drive is automatically re-enabled after the instant release system has been activated, whatever the position of the Head Section.

The "CPR emergency release" function is unavailable when transporting the bedside cabinet on the bed. The nursing staff must ensure that the physiological state of the patient is compatible with these movements.

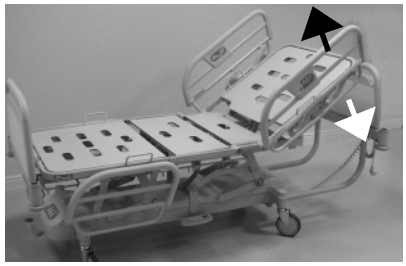
4.5.2 Head Section control

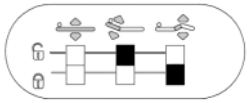
or **or** **or**

Head Section adjustment can be activated by the patient / nurse controls or by the hand pendant controls.

The "Up" button on the Head Section adjustment control activates the Auto-contour feature.

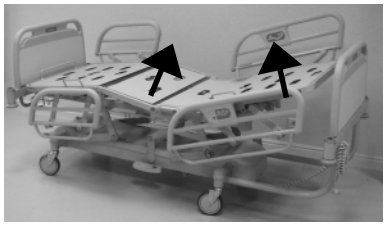
The Knee section adjustment control should be locked out using the lock-out panel if only the Head Section height adjustment feature is required.





***NOTE**: When using the Bedside Cabinet Transport function, lock out the Head Section control. See precautions, section 4.17.*

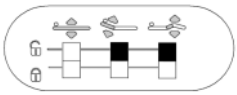
4.5.3 Auto-contour or



The Auto-contour feature (automatic comfort level positioning) can be activated by using the patient or nurse controls (Head Section controls) or by the hand pendant controls (optional).

The Auto-contour feature raises the Head Section and the Knee section simultaneously.

This feature can prevent the patient from sliding down in the bed.



The Auto-contour feature is only available when both Head Section and Knee section adjustment are enabled.

When the Head Section is locked out, the Knee Section can always be activated by the Head section controls.

4.5.4 Angle indicators

The angle indicators help to monitor Head Section and Knee section inclination thanks to 10° divisions and to position the Head Section correctly when using the Bedside Cabinet Transport function.

Knee Section Inclination

Head Section inclination

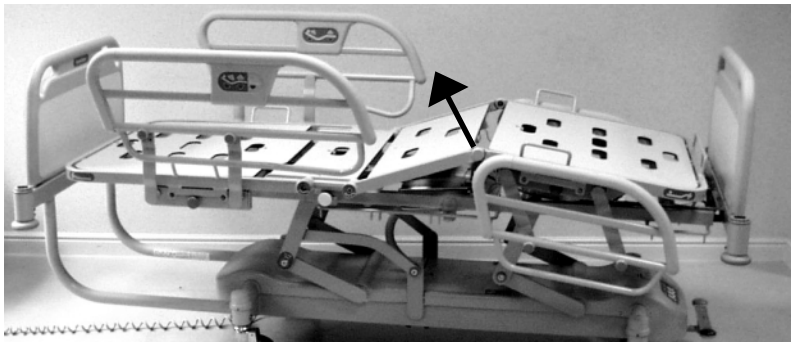
With bedside cabinet transport option

4.6 KNEE SECTION

4.6.1 Electrical Knee section control

or **or**

Knee section inclination can be adjusted by using the patient or nurse controls or by the hand pendant controls.



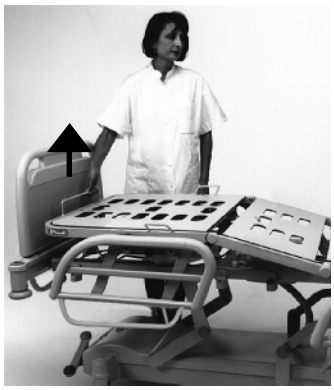
When the Knee section is raised, the Leg section is lowered at an angle of approximately -9° to the sleep surface (see section 4.6.2.).

4.6.2 Manual Leg section adjustment

When the Knee section is raised, the Leg section can be pegged at several pre-defined angles: 1°, 9° (normal position), 15° and 22° from horizontal.

To raise the Leg section:

- Use the pull-out handle on the end of the Leg section to raise it to the required position
- Carry on lifting until the Leg section locks into position.



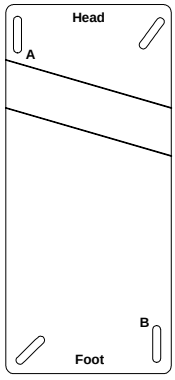
To lower the Leg section:

- Lift the Leg section slightly to remove the safety catch
- Pull on one of the handles located under the Leg section behind each symbol
- Lower the Leg section to the required position
- Release the handle and ensure that the Leg section is locked into position.

4.7 BRAKE AND STEER SYSTEM

4.7.1 Using the brake and steer pedal

The brake and steer pedal located at the foot of the bed on the chassis cover controls all four wheels.



"BRAKE" position (beige pedal down):
the bed cannot be moved.

"NEUTRAL" position (pedal horizontal):
All four wheels can turn and swivel.
The bed can be turned in any direction.

"STEER" position (green pedal down):
Three wheels turn and only the front left-hand wheel is used to steer (wheel swivel is disabled).
The bed can be moved in a straight line.

4.7.2 Moving the bed

Before moving the bed:

- ***Ensure that siderails are raised to prevent falls if there is a patient in the bed***
- ***Position sleep surface between low and mid-height using the angle indicator***
- ***Disconnect the power cord and electrically powered accessories (e.g. air mattress, etc.) then secure them on bed as shown in section 4.10***
- ***Ensure that the bed or accessories (patient helper, etc.) will not catch on doorways or other obstacles***
- ***Place the hand pendant control in its container under the sleep surface to prevent any damage to the control or cable (e.g. doorway, etc.)***

- ***Never try to move the bed by pulling on the power cord***
- ***It is advisable to remove the patient helper when transporting the bed and bedside cabinet through low doorways (< 2.4 m).***

Two people should move the bed (one at each end) in the following situations:

- ***Moving the bed on a slope***
- ***Foot end steer wheel***
- ***Transporting with bedside cabinet***
- ***Moving the bed with a heavy load (heavy patient, accessories fitted, water mattress, etc.).***

To move the bed:

- Grip the footboard or frame with both hands
- Use the brake and steer pedal to unlock the wheels
- Push the bed, steering with the footboard or frame.

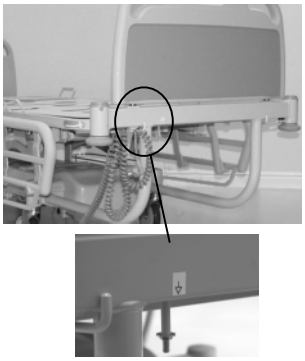
When moving in a straight line, position the pedal on "STEER" and push the bed using the endboard opposite the steering wheel (see section 4.7.1).

4.8 EQUIPOTENTIAL TERMINAL

When direct intravascular or intracardiac connections are in use, the electrical potentials of all the unprotected metal bed parts need to be equalised.

To equalise potentials, connect the equipotential cable (ref. AC968A) to the connection terminal.

PLEASE NOTE: *Failure to connect the equipotential cable may result in injury to the patient through electric shock.*



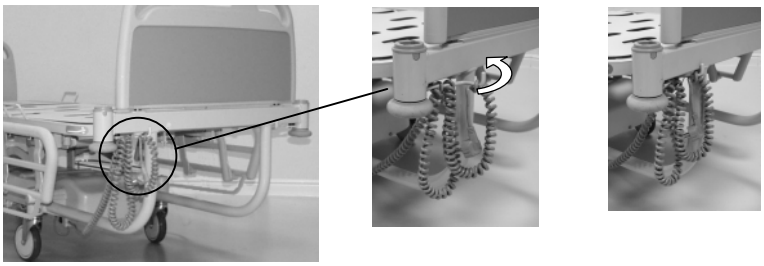
4.9 SECURING THE POWER CORD

The power cord must be secured to the bed whenever the bed is moved.

PLEASE NOTE: *Failure to do this may result in damage to the cable and create an electrical hazard.*

Push the headboard holder and the cord out of the way under the cross bar.

When storing the headboard on the headboard holder when transporting a bedside cabinet on the bed, the power cord must be rolled up on the headboard holder before replacing the headboard.



4.10 HEADBOARD AND FOOTBOARD REMOVAL

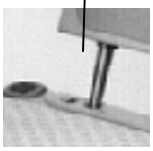
No special tools or devices are required to remove and place the headboard and footboard.

To position the headboard or footboard:

- Hold the endboard by the handles on either side
- Place the studs in the holes in the head or foot of the bed.

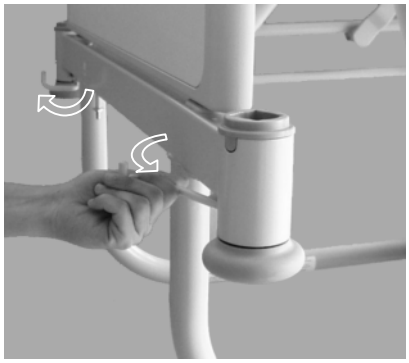
To remove the headboard or footboard:

- Hold the endboard by the handles on either side and pull upwards.



PLEASE NOTE: W*hen end frames are fitted, the headboard and footboard can be removed by simply lifting the board slightly and pulling outward from under the frame.*

To improve patient access, pull out the two hooks and hook the end-board as shown in the picture below.

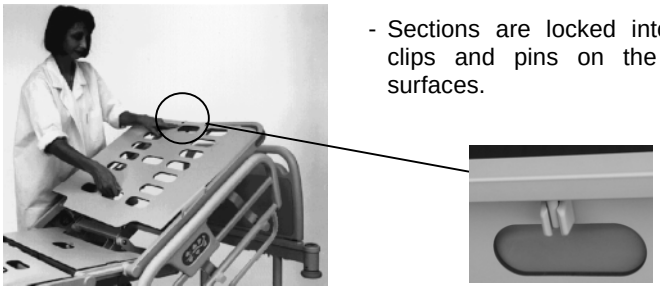


Ensure that the power cord is not wound on one of the hooks.

4.11 FRAME

The four sections of the bed can be removed for easy cleaning.

Handle as shown in the picture and ensure that they are securely locked into place.

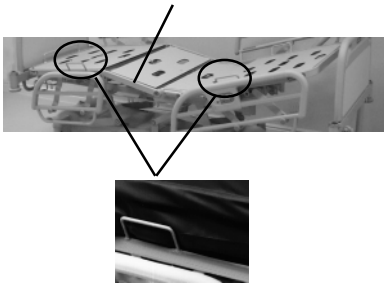


- Sections are locked into place by clips and pins on the four hard surfaces.

Ensure that sections are properly positioned and secured after fitting.

4.12 RESTRAINING STRAP POSITIONS

Restraining strap positions Knee Section



When required, patient-restraining straps must be tied to the proper positions provided.

Two positions are located on each bed section (Head Section, Knee Section and Leg Section) on either side of the bed.

Thread the straps through the positions.

Restraining strap positions Head section and Leg section

Do not fix the restraining straps to any position (particularly siderails) other than those provided for this purpose.

When the patient is immobilised by the straps, the electrical functions must be locked out and the bed must be fitted with either accessory AD113A (Siderail protective cover) or a system of ankle restraints must be used.

4.13 FOOT END BED EXTENSION (optional)

To use the extension:

- Lift the handle located under the footboard
- Pull out the extension.

Three positions are available:

- 6 cm - 12 cm - 18 cm -

The extension locks into position with a safety catch.

When extension is no longer in use, use the same method to store the extension away.

A specially fitted panel and cushion are supplied as accessories with the extension (see section 5.4).

4.14 LINEN HOLDER (optional)

The EVOLUTION footboard can also be used as a linen holder.

Safe Working Load: 15 kg

To use the linen holder:

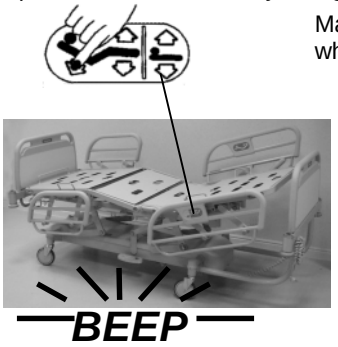
- Hold the footboard by the handles on both sides and pull upward
- Tilt the board outwards and place horizontally.

Lift the board vertically to replace in footboard position.

***PLEASE NOTE*:** *The cone-shaped retaining pins are specially designed to prevent the footboard being removed when used as a linen holder.*

4.15 BATTERY (optional)

The power unit automatically charges the battery.



Maximum life is approximately three months when not connected to mains supply.

An alarm sounding when an electrical function is activated indicates the battery needs re-charging. The ongoing movement will be completed.

The bed must then be re-connected to the mains power supply to recharge the battery and allow use of the electrical functions (re-charging time ≈12 hours).

PLEASE NOTE: *if the bed has a battery (optional), it must be fitted with antistatic castors.*

4.16 HAND PENDANT CONTROL SOCKET (optional)

This option is designed for accessory ref. AD091A (see section 5.7)

4.17 BEDSIDE CABINET TRANSPORT (optional)

The "Bedside Cabinet Transport" function can only transport bedside cabinets of the type NM1B or NM2B on the support rails integrated in the structure.

CAUTION:

When moving bed and its bedside cabinet, the electric functions of the bed must be locked out.

The "Trendelenburg/Reverse Trendelenburg" and "Emergency CPR" functions are unavailable when transporting a bedside cabinet on the bed.

The nursing staff must ensure that the physiological state of the patient is compatible with these movements.

Make sure that the bed and accessories (patient helper, I.V. pole, etc.) cannot strike any fittings (doorways, etc.)

Never remove the bedside cabinet from its support if its castors are not in contact with the floor.

4.17.1 Fitting the bedside cabinet to the bed:

- Close the bedside cabinet doors and drawer and put the eating tray on the bed in its folded position
- Release the brake, move the bed away from the wall to free the head-end section in order to fit the bedside cabinet, then apply the brakes
- Remove the headboard
- Set the sleep surface to the bedside cabinet loading-height, and head-end bedside cabinet support rails to approximately 20mm below the aluminium rails of the bedside cabinet
- Raise the Head Section so that the lateral angle indicator lies within the green area for use of the "Bedside Cabinet Transport" option,

- Slide the bedside cabinet onto the support rails, with the bed's eating tray pointing to the outer head-end of the bed. Avoid crushing or pulling the main power cord when fitting the bedside cabinet
- Operate the Variable Height so that the bedside cabinet castors are about 30mm from the floor to prevent any impact when moving the bed (moving through doorways, into lifts, etc.). The Reverse Trendelenburg lateral angle indicator must lie within the green area for use of the "Bedside Cabinet Transport" option

- Disconnect the main power cord and secure it on the bed as shown in section 4.9
- Fit the headboard between the bedside cabinet and the Head section or on the head supports

- Lock out the electric functions of the bed before moving the bed and bedside cabinet to prevent any accidental handling that knocks the bedside cabinet against the structure of the bed.

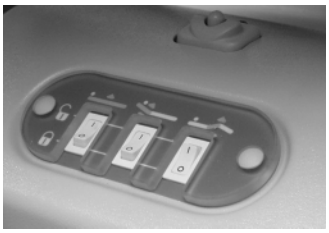
4.17.2 Removing the bedside cabinet from the bed:

- Move the bed away from the wall to obtain free access for removing the bedside cabinet, then apply the brakes
- Connect the mains power cord
- Remove the headboard
- Unlock the electric function of the bed if necessary
- Operate the Variable Height lower function so that the bedside cabinet castors touch the floor and the bedside cabinet is no longer supported by the rails
- Remove the bedside cabinet from its support rails, avoid crushing or pulling the main power cord when carrying out this operation
- Fit the headboard
- Release the brakes, put the bed back into its position, then apply the brakes
- Set the sleep surface to the required auto-contour position.

4.18 LOCKOUT SWITCHES PROTECTION

The lockout switches protection permit to protect them against an accidental lockout or unlock.

NOTE *: This protection can be unclipped for cleaning.*



5. ACCESSORIES

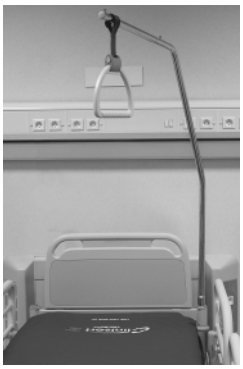
5.1 PATIENT HELPERS

5.1.1 Fixed patient helper Type AD080B

Safe Working Load: 75 kg (1)

The patient helper can be fitted into either of the two square sockets at the head of the bed.

Place the patient helper in the socket so that the Egress bar is over the bed.



Correct position

Incorrect position

5.1.2 Adjustable patient helper type AD081C

Safe Working Load: 75 kg (1)

The adjustable patient helper (three positions) can be fitted into either of the square sockets at the head of the bed.

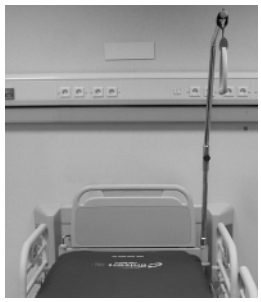
Place the patient helper in the socket so that the Egress bar is over the bed and so that the patient helper arm is in the most suitable position (see picture on right).

(1) Safe Working Load specification allowing for a substantial safety margin.

5.1.2.1 Patient helper positioning

Tuck-away position

Normal (Egress) position



Patient transfer position

Use the blue knob marked "TURN" to adjust patient helper position.

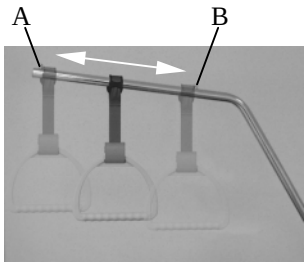
To adjust patient helper position:

- Turn the blue knob a quarter turn clockwise to unlock the patient helper
- Place the patient helper in the required position
- Turn the knob the other way to lock in position
- Turn the patient helper slightly until it locks into place
- Pull patient helper to ensure that position is secure.

The Egress bar on the patient helper can be adjusted according to the patient.

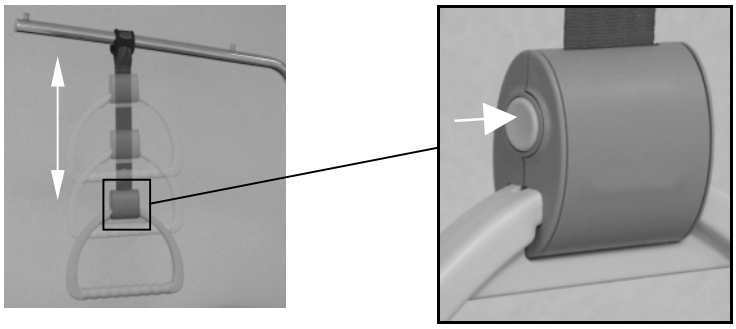
The patient helper in the patient transfer position is designed to help the patient lift some of his/her weight so as to assist the nursing staff with their work. This position is not designed to give the patient autonomy.

5.1.3 Handle and patient helper storage



The patient handle strap adjustment is limited by the pegs, A and B, on the patient helper in order to avoid any risk of slippage that could cause an injury to the patient.

The patient handle on the patient helper can be adjusted according to the patient preference.



To adjust the height of the patient handle, push on the locking mechanism button, adjust the height and release the button.

Check the locking mechanism by pulling on the patient handle.

Place the patient handle on the patient helper arm when not in use in order to eliminate any obstruction.

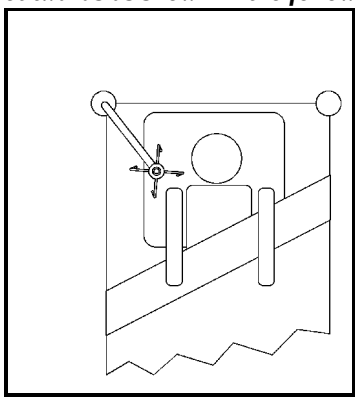
⚠ ***If the bed is equipped with both a rotating patient helper (ref. AD081C) and an I.V. Pole, do not use the patient helper "tuck-away" position as this may interfere with the I.V. pole.***

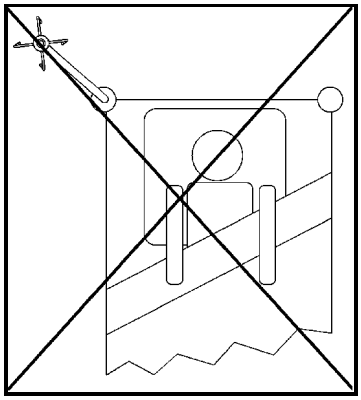
Incorrect position

5.2 VARIABLE HEIGHT I.V. POLE

Safe working load:
Refer to the value indicated on the I.V. pole [1]

Ensure that the I.V. pole is positioned facing into the bed and not outwards as shown in the following illustrations.





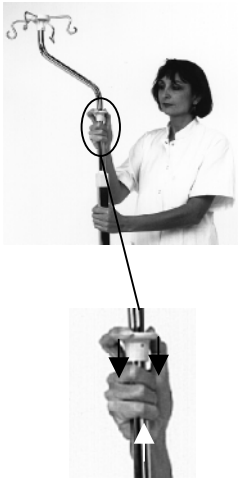
5.2.1 Using the I.V. Pole AD082A

To lengthen the I.V. pole:

- Raise the upper part of the pole to the desired height.

To shorten the I.V. pole:

- Hold the upper part of the pole firmly and lift slightly while pressing downward on the plastic sleeve with two fingers of the same hand
- Lower the pole to the required height
- Release the sleeve.

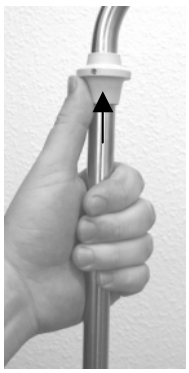


[1] *Safe working load specification allowing for a substantial safety margin.*

5.2.2 Using the I.V. Pole AD165A

To raise the I.V. pole:

- Loosen the knob
- Hold the lower part of the pole with one hand and raise the upper part to the desired height
- Tighten the knob.

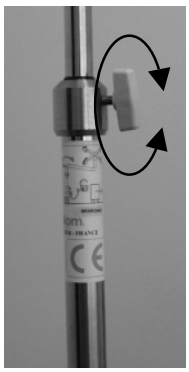


To lower the I.V. pole:

- Loosen the knob
- Hold the upper part of the pole firmly and lift slightly while pressing upward on the plastic sleeve with the same hand
- Lower the pole to the required height
- Release the sleeve
- Tighten the knob.

To turn the I.V. pole:

- Loosen the knob
- Turn upper part to the required position while respecting the safety recommendations
- Tighten the knob.



5.3 END-BOARD FRAMES (AC930A)

The frames fit into the sockets at the head and foot of the bed.

To fit a frame:

- Unscrew the two black knobs from the frame
- Fit both ends of the frame into the sockets at the same time
- Fit the knobs through the under side of the socket and tighten.

***PLEASE NOTE**: Introduce both ends simultaneously to avoid the frame getting stuck in the sockets.*

The monitor stand is fitted in the same way (ref. AC967A).

5.4 BED EXTENSION PANEL (AC992A)

The panel fits into the space between the bedframe and the footboard when the extension is fully extended.

The panel is secured by a clip and pin system.

To fit the panel in place:

- Position the panel clips over the pins
- Press firmly into place.

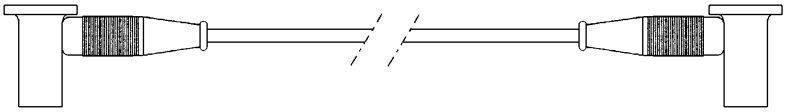
The cushion is designed to extend the sleep surface.

When the panel is fitted, the extension cannot be retracted.

5.5 EQUIPOTENTIAL CABLE (AC968A)

This cable is designed to connect intra-vascular or intracardiac equipment to the bed.

It consists of two POAG-WB 6 DIN type connectors and a 2m long yellow and green cable.

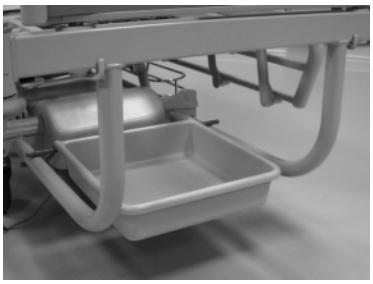


5.6 HEADBOARD TRAY (AD083A)

Safe Working Load: 15 kg [(1)]

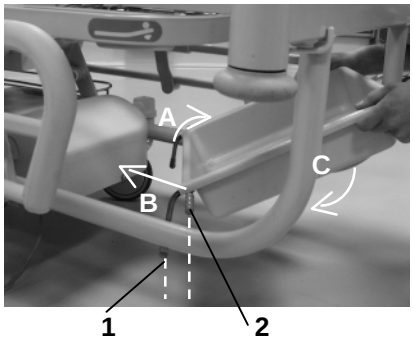
The tray can be used for small objects and clothes.

The tray fits over the chassis bars under the headboard and up against the chassis cover.



Fitting the tray:

- Introduce the tray sideways between the chassis bars so that pins 1 and 2 fit over one of the bars
- Turn the tray (A) so that it is now in line with the bars
- Slide the tray forward (B) until it touches the chassis cover
- Place the tray on the chassis bars (C).



(1) *Safe Working Load for the I.V pole, allowing for a substantial safety margin.*

Small objects and clothes placed in the tray should not exceed the height of the tray.

Ensure that the tray does not project out from under the bed.

5.7 HAND PENDANT CONTROL (AD091A)

The hand pendant control must be handled carefully.

The hand pendant control is designed for use by patients who cannot reach the patient siderail controls.

The hand pendant control can be used in the same way as the patient siderail controls (see section 4.2.1.1).

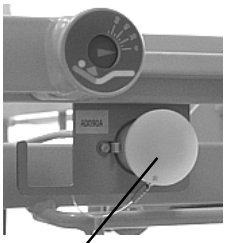
The hand pendant control uses the same colour code as the siderail controls (see section 4.2.1.3).

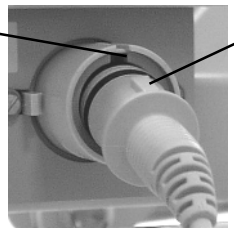
5.7.1 Installing the unit

The hand pendant control plugs into the socket located under the sleep surface.

To install the unit:

- Remove the socket cover A
- Turn the plug so that locating pin B fits into groove C in the socket
- Push the plug firmly into the socket.





5.7.2 Use by nursing staff

The hand pendant control works the same way as the siderail control panels.

Head-section – Auto-contour: See sections 4.5.2 and 4.5.3

Knee section: See section 4.6.1

5.7.3 Use by the patient

Nursing staff need to assess whether the patient should be left unattended with the hand pendant control.
If the patient is able to use the siderail controls, the hand pendant control should be disconnected. (see section 5.7.3).

5.7.4 Storage

When not in use, the control must be kept in its storage space under the sleep surface.

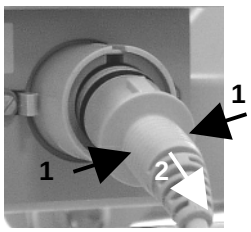
Hang the cord over the hook and hang up the control.

The control must never be left in any other place as this could lead to undue pressure on the unit causing sudden bed movement.

5.7.5 Patient transfers and bed moves

Always store the control in its storage emplacement under the sleep surface when moving the bed, to avoid damage to the unit or the cord (e.g. when passing through doorways, etc.).

5.7.6 Disconnecting the control



1. Take hold of the plug
2. Pull the plug from the socket
3. Replace the socket cover **A** (section 5.7.1) and press home.

Never pull on the control cord.
Remember to replace the socket cover A.

5.8 BILATERAL VARIABLE HEIGHT FOOT PEDAL (AD090A)

See the accessory user leaflet for instructions on how to install.

See section 4.4.2. for instructions for use.

The accessory must be fitted by an authorised technician.

5.9 HAND PENDANT CONTROL SOCKET (AD089A)

This accessory is used to connect the hand pendant control (ref. AD091A).

See the accessory user leaflet for instructions on how to install.

See section 5.7. for instructions for use.

The accessory must be fitted by an authorised technician.

5.10 SIDERAIL PROTECTIVE COVER (AD113A)

Please refer to the instructions that come with the protective cover when using this accessory.

5.11 OXYGEN CYLINDER HOLDER (AC959A-AD101A-AD102A)

Safe Working Load: 15 Kg [1]

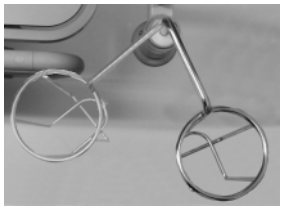
The oxygen cylinder holder is designed to accept an oxygen cylinder and must only be fitted on the patient helper supports at the head-end of the bed outside the sleep surface. It can be rotated by approximately 90°. Each holder corresponds to one type of cylinder and must never be used for a different cylinder model.

AC959A for cylinder model B5 (Ø140)

AD101A for cylinder model D (Ø100)

AD102A for cylinder model E (Ø100)

The following recommendations are designed to prevent any possible incidents so that this accessory can be used in optimum safety conditions for both the patient and nursing staff.



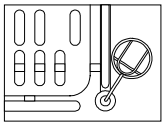
Check that cylinder is correctly positioned at the base of the Cylinder holder.

Never use a different oxygen cylinder model from the model that is specified above (danger of dropping or interfering with various operations).

Pay close attention to the position of the Cylinder Holder (particularly if it is under the Head Section) when setting the Trendelenburg/Reverse Trendelenburg positions or when lowering the sleep surface.

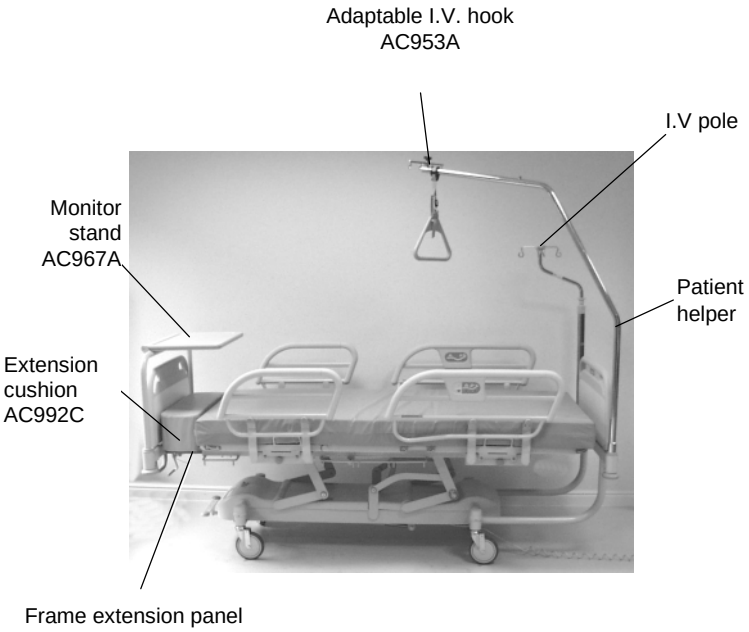
Ensure that the Cylinder Holder is not allowed to fall when raising a siderail.

Prevent any impact when moving a bed equipped with a Cylinder Holder to another room (especially doorways). If the Cylinder Holder does not allow the bed to go through a doorway, position the holder in front of the bed, otherwise place it and the cylinder on the mattress (remember to put the holder in its normal position after moving the bed).



[1] *Safe Working Load for the I.V pole, allowing for a substantial safety margin.*

5.12 ACCESSORY HOLDER



Certain accessories may be specific to certain bed models and cannot be used with other models.
Due to the diversity of accessories/options, it is always advisable to ensure that they are mutually compatible: load, risk of bumps or collision.

6. CLEANING

The bed has been designed for easy cleaning and optimised disinfecting.

6.1 SAFETY RECOMMENDATIONS

- Ensure that the bed will not move
- Lock out all electrical functions
- Disconnect the bed from the mains power supply
- Ensure that all connections are firmly in place (hand pendant control, lock-out controls, power drives connected to main power supply unit)
- Never pour water on the bed, use a high-pressure hose, or wash in a tunnel wash
- Never use water at a temperature of over 60°C
- Avoid getting excess water on connecting plugs, the control lock-out switches and on the mattress
- Refer to the manufacturer instructions for the cleaning product
- Thoroughly dry the bed before reusing it.

Failure to implement one or more of these recommendations may lead to damage or deterioration, preventing use of the bed and rendering the warranty void.

6.2 GENERAL ADVICE

NOTE 1: *Staining disinfectant products must be removed rapidly to avoid permanent staining.*

NOTE 2: *A list of recommended cleaning products for all types of cleaning requirements will be supplied on request along with a special maintenance advice leaflet.*

DO NOT EXCEED RECOMMENDED DOSES: read diluting instructions carefully (see detergent and disinfectant manufacturer's instructions leaflets).

Jack plugs may be cleaned with running water (normal tap pressure) but not hosed down.

Avoid excessive temperature differences between the water and the jacks.

- Bed and accessories: see recommendations under 6.3
- Plastic parts: see recommendations under 6.3

The hard surfaces can be washed with running hot water away from the bad after being removed.

- Endboards, siderails: see recommendations under 6.3

The following products should not be used: chlorine, formaldehyde, or phenol-based products and solvents of any kind. Never use abrasives, cleaning powder or cleaning pads, which would damage components.

6.3 CLEANING AND DISINFECTING RECOMMENDATIONS

The following recommendations are not designed to replace existing cleaning protocols for your hospital drawn up by the Hygiene Officer or by other bodies.

The disinfecting method described below applies specifically to the bed and its accessories and is designed to save time and to help combat nosocomial infection more effectively.

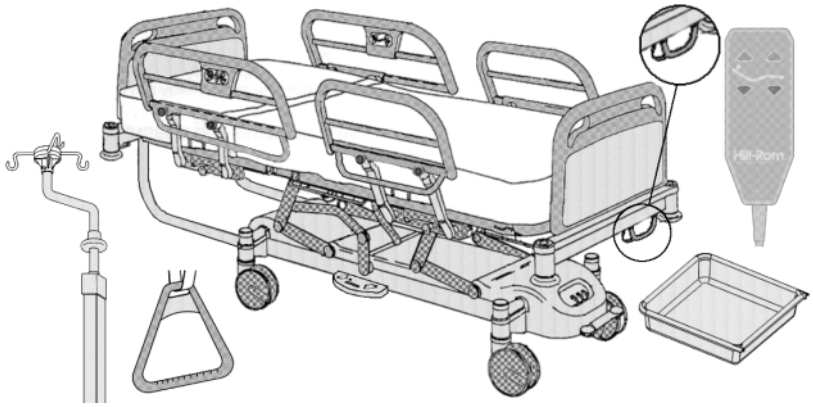
6.3.1 RECOMMENDED MATERIALS AND PRODUCTS

- Several single-use tissues or recyclable textile wipers
- One pair of household gloves
- ***Detergent-disinfectant*** solution diluted according to hospital guidelines (and taking into account the recommendations given above) or a disinfecting spray
- Use a ***standardised product*** in compliance with French AFNOR standard NF T 72-101 (active against bacteria including BK, fungi and viruses – including HIV-1 and HBV).

6.3.2 RECOMMENDED CLEANING AND DESINFECTION METHOD

- Always wipe downward, working from the cleanest to the dirtiest areas
- Do not scrape surfaces; keep wipes humid (wet as many times as needed and do not wring out too much water)
- ***Let product dry according to manufacturer's recommendations*** to ensure maximum efficiency
- Rinse if necessary: follow the disinfectant product supplier's recommendations
- Change wipes when moving from the least contaminated areas to areas of medium or to highly contaminated areas
- Change wipes when moving to another bed
- Always dry the bed thoroughly after it has been cleaned.

6.3.3 AREAS TO TREAT ACCORDING TO CLEANING - DISINFECTING



Every day

After patient departure or transfer

Thorough cleaning (after an infected patient or every two months)

6.3.4 DECONTAMINATION RECORD

A decontamination record should be kept for each bed, mentioning:

- Date (month), ward and room number, bed reference number
- Cleaning frequency, materials and products used
- ANY INFECTIOUS EVENTS.

7. SAFETY TIPS AND PRECAUTIONS

7.1 SAFETY TIPS

7.1.1 Brake and steer

The brake must be on when the bed is stationary. Try moving the bed to ensure that wheels are locked.

Risks and hazards if bed is not properly secured:

- patients may fall when trying to get in or out of bed.

Patients should be moved with the bed in intermediate position and by 2 people if there is a slope or the "steer" option is fitted (see section 4.7.2).

Ensure that accessories (patient helper, I.V. Pole, etc.) will not hinder progress through doorways or other passages.

7.1.2 Bed position

The bed should be kept in the "low" position to reduce the risks of patient falls, especially when left unattended.

Use the Variable Height feature of the sleep surface to adjust the bed to the required height when the patient is undergoing treatment.

7.1.3 Trendelenburg/Reverse Trendelenburg (optional)

This feature is mandatory in intensive care units and must only be operated under the supervision of or by trained nursing staff.

The Reverse Trendelenburg feature is available even without power, when the sleep surface is positioned between "low" and "mid-height" (see section 4.4.2.)

The patient's safety may be jeopardised in the absence of a Reverse Trendelenburg feature in cases of haemodynamic shock or severe breathing difficulties.

Always hold the bed with one hand when pulling the Trendelenburg/Reverse Trendelenburg activation lever.

Failure to hold the bed may result in the bed being tilted abruptly, causing injury to patient and/or staff.

If the patient is heavy or the bed is fitted with accessories that have an off-centre load, it is advisable to carry out the operation with 2 people when using the sleep surface or positioning a cardiac chair.

Trendelenburg/Reverse Trendelenburg function is unavailable when transporting the bedside cabinet on the bed. Nursing staff must ensure that the physiological state of the patient is compatible with these movements.

7.1.4 Integral siderails

The siderails should be raised and locked when the patient is left unattended, thus reducing the risk of accidental falls.

However, use of the siderails must only be considered if appropriate and must be adapted to the health and behaviour of the patient.

Suitably qualified medical personnel must determine the appropriate use of the siderails and the level of patient monitoring or immobilisation necessary to ensure that patients suffering from particular behavioural conditions (e.g. not limited to but including agitation, mental confusion or loss of sense of direction, behavioural disorders, weakness etc.) can use the bed in the safest conditions.

The siderails are not designed to restrain or immobilise the patient in the bed.

They are not intended to receive immobilisation equipment (e.g. straps).

Always keep the bed in its lowest position when the patient is left unattended.

Given the many different types of mattresses available, it is not possible to ensure the compliance of all mattresses with our recommendations for our beds and siderails. Not all mattresses are interchangeable, the user is thus recommended to ensure that the safety requirements are complied with when mattresses provided by another manufacturer are used. This particularly applies to the height of the siderails and the dimensions of the sleep surface.

The use of a mattress thicker than that recommended may reduce the effectiveness of the siderails in preventing the patient from falling. In this case, the patient must be kept under special surveillance.

Hill Rom shall in no way be held liable for problems arising from the use of mattresses not respecting the recommendations indicated in the instruction manual.

Medical staff should note the risks involved in the use of siderails of any model or type with particularly old, frail, restless, disorientated, confused or obsessive patients.

The following recommendations are intended for caregivers in order to help them to minimize the specific risks incurred by certain patients.

Certain national health authorities have issued guidelines on how to reduce these hazards.

- It is recommended that a patient reception procedure be established to enable profiles of patients at particular risk to be identified and appropriate measures adapted to the health and the behaviour of these patients to be implemented.

Among the profiles of patients at risk are:

- Elderly and infirm persons
- Persons with dementia, cerebral disorders, microcephalia or hydrocephalus, or a loss of sense of direction
- Persons exhibiting confused or restless behaviour.

One of the suitable measures that has already proven effective is to draw up a protocol indicating:

1. In which situations and at what times the siderails should be used, under which conditions and with what type of bed and mattress, and what immobilisation or special measures must be used (refer to the specific recommendations for half-length siderails that follow)
2. In which situations and at what times should one proceed to immobilise a patient, or use means other than the siderails to reduce risks associated with falls (foam cushions on the floor, for example)
3. In the case where a means of immobilisation is used, follow the instructions and advice provided by the manufacturer, particularly fixation checks
4. In which way a patient must be monitored, whether immobilised or not, including times when the patient is not receiving care.

Specific recommendations for half-length siderails:

- In the case where patients present a profile at risk as described above we recommend adopting one of following measures:
  a) Use accessory AD113A (siderail protective cover) when the risk of the patient slipping between the raised siderails is significant and could have serious consequences for the patient's health

b) Use accessory AD113A when an abdominal belt is being used singly or with ankle restraints

c) Lower the foot end siderails to their half-raised position when the risk of the patient slipping between the siderails is significant but does not present serious risks for the patient's health.

7.1.5 Mattresses

Only mattresses recommended by Hill-Rom® should be used.

In order to reduce the risk of the mattress sliding, it is recommended that the mattress be placed between the raised edges and that it is laid correctly on the sleep surface.

Should you wish to use a mattress other than those recommended, please ensure that it is compatible with the Hill-Rom® bed model and that it will not have any undue effect on performance, quality or safety.

Use of the bed with a mattress exceeding the recommended height (175 mm) may reduce siderail effectiveness.

The beds are designed for use with standard size mattresses (Length: 195-200 cm, Width: 85-88 cm) suitable for the sleep surface dimensions.

If the bed is fitted with an electrically powered dynamic mattress, the power cord must be stored so as to prevent it from being cut by the moving parts of the bed.

If the mattress power cord is unplugged, it is advisable to store it on one of the headboard supports (section 4.9).

7.1.6 Cleaning and authorised cleaning fluids (see chapter 6)

Always disconnect the bed from the mains power supply before cleaning.

Ensure that all internal electrical connections are secured.

After cleaning, always ensure that the bed is perfectly dry and that all functions are operational.

Only use authorised cleaning fluids and products.

7.1.7 Electrical function lock-out

The electrical function lock-out controls prevent any undue bed movement which might cause injury to the patient (for instance when under traction). It is highly recommended that functional lock-out should be used whenever a patient is undergoing examination or treatment or when the bed is going through maintainence or being moved. Functions should also be locked out when the patient is left unattended and if nursing staff believe that the patient is not capable of safely operating the controls independently.

7.1.8. Parts and accessories

Only use manufacturer's parts and accessories.

Never alter the bed without the manufacturer's prior consent. Alterations may result in injury to the patient or damage to the bed itself.

7.1.9 Electrical safety precautions

The equipotential cable (accessory ref. AC968A) must always be used when the patient is connected to intravascular or intracardiac equipment. The cable must be connected to the equipotential connector located on the bed and the bed must then be connected to appropriate equipotential terminal.

All connections must comply with standards as defined under section 3.2.

In compliance with standards relating to electromagnetic interference for medical equipment, this product does cause interference or receive interference when combined with other medical devices that also comply with the electromagnetic standards in force.

Some devices, particularly older ones, may however experience interference or may themselves interfere with the working of this product.

The user of such devices is responsible for ensuring that any potential malfunctions will not endanger the patient or any other person.

Always ensure that the power cord is disconnected and hooked to the bed before moving the bed.

Only duly qualified and authorised staff should carry out electrical maintenance.

Never clean or perform maintenance on the bed without disconnecting it from the mains power supply.

The battery (optional) must never come into contact with fire, be placed in liquid or discarded in a refuse bin. In the event of the battery being damaged, please return it to our after-sales service or contact the supplier directly.

Use only nasal tubes and oxygen masks.

Masks and tubes should always be kept higher than the sleep surface.

Always lock out the Variable Height function before maintenance.

If the bed is fitted with a battery (optional), it must also have antistatic castors.

7.1.10 Patient Helper

Suitably qualified medical personnel must determine whether or not the patient helper can be left at the disposal of patients suffering from particular behavioural conditions (e.g. not limited to but including agitation, mental confusion or loss of sense of direction, behavioural disorders, weakness etc.) in order that the bed be used in the safest conditions.

7.2. MAINTENANCE

7.2.1 SAFETY PRECAUTIONS

Only duly qualified and authorised staff are authorised to carry out maintenance.

Before any maintenance or repair work:

- Lock out all electrical functions
- Disconnect the bed
- Ensure that the bed cannot move
- Secure the frame and ensure that all movements are locked.

Never open or pierce an electrical or pneumatic jack (high-pressure cylinder).

Contact our after-sales service for any specific maintenance problem (leaks, blockages, etc.)

If a battery is fitted:

- Never open, burn or immerse a worn battery (see section 7.6)
- A new battery should only be fitted by qualified maintenance staff
- Never leave the power supply block disconnected from the battery
- Never leave the chassis covers open.

7.2.2 PREVENTIVE MAINTENANCE

An annual maintenance visit is recommended to keep the bed fully operational and to ensure optimal use.

The following points should be given particular attention:

- Brake locking system
- Siderail locking mechanisms
- Drive systems (especially jacks), movement control systems (Head Section, Leg section and Trendelenburg / Reverse Trendelenburg) and their ancillary parts
- Bed movement and ancillary part bearings
- Control operation (in particular return to neutral)
- The state of cables and electrical components
- Correct earthing of metal parts and equipotential connectors
- Waterproofing of electrical connections
- Cabling
- Correct condition of the frame and welded assemblies (corrosion and shocks).

The whole electrical system should be inspected by an approved after-sales service on average once every three years in order to ensure continued operation in optimal conditions.

⚠ ***The frequency of the maintenance visits should be determined according to the condition of the bed and its specific usage, as some components may need changing after a given period of use (see Maintenance Manual).***

7.3. ABNORMAL USE

Abnormal use may result in damage to the bed and injury to patients or staff.

Examples of abnormal use:

- Use of the bed for any purpose other than for general or intensive care
- Use of the bed in a hyperbaric chamber
- Use by any person who has not read the User Manual or has not been briefed by an authorised person
- Use of functions, accessories or bed movement by a child
- Use of the bed for patients under the age of 12 (or thereabouts)
- Operation of electrical functions by several persons at the same time
- Placing objects or equipment on the chassis cover or standing on the cover
- Lifting a load in excess of 250 Kg
- Use of the bed with a load of over 170 Kg (normal work load) or 220 Kg with the Bedside Cabinet Transport option
- Connection to a non standard power supply
- Connection of other electrical appliances to the bed
- Use of accessories and equipment other than those specified by the manufacturer
- Pulling on the power cord to move the bed
- Transporting the bed and bedside cabinet using unauthorised methods (section 4.17)
- Hosing down the bed or washing in a tunnel wash
- Use outdoors or in a vehicle
- Moving the bed over soft ground or over inappropriate surfaces
- Moving the bed along inclines of over 10° (with or without a patient)
- Drive overload (see section 8.1.1)
- Use of oxygen tent type respiration devices or devices that extend below the sleep surface
- Use with flammable anaesthetics such as oxygen or nitrogen protoxide
- Use at unauthorised temperatures (under 5°C or over 40°C)
- Any use not complying with the instructions for use described in this manual
- *Or any other use which does not comply with normal use of a hospital bed or with its stated purpose.*

7.4. TRANSPORT AND STORAGE

A number of essential safety precautions must be taken when transporting the bed and its accessories to another location.

During transport, the bed must:

- Be in the "low" position
- Have all functions locked out
- Be covered, with all moving parts secured and maintained by straps
- Be damp-proofed
- Be kept at a temperature of between 0° and 40°C.

During storage the bed must:

- Be in the "low" position
- Have all functions locked out
- Be covered and all moving parts secured
- Be damp-proofed
- Be kept at a temperature of between 0° and 40°C.

Beds must never be transported or stored one on top of the other.

***PLEASE NOTE**: In transport or storage, batteries should be recharged every 2 weeks when fitted.*

7.5. DE-COMMISSIONING

The bed and its accessories should be cleaned and disinfected before de-commissioning.

De-commissioned equipment materials (plastics, electrical components, etc.) must be recycled in proper waste recycling units.

As regards the battery:

- **It must be returned to Hill-Rom® or the local distributor.**

8. SPECIFICATIONS

Hill-Rom has an ongoing product improvement policy. Specifications are therefore liable to be altered without notice.

8.1. STANDARD FEATURES

8.1.1 Bed model specifications

Type	EVOLUTION
Reference	LI156Ex
Class according to IEC 60601-1	Type B
Protection against harmful ingress of water (according to IEC 60529)	IPX4
Electric shock protection	Class I
Intermittent operation	6 min/h
Safe Working Load [1]	
Basic version	170kg
"Bedside Cabinet Transport" option	220kg
Maximum lifting load	250kg
Bed weight (no mattress or accessories)	162kg
Version 230V	
Voltage	230V A.C. + Earth
Frequency	50/60 Hz
Maximum power load	320VA
Fuse amperage	1.25A
Version 110V	
Voltage	120V A.C. + Earth
Frequency	50/60Hz
Maximum power load	320VA
Fuse amperage	2.5A
Version 100V	
Voltage	100V A.C. + Earth
Frequency	50/60Hz
Maximum power load	320VA
Fuse amperage	3.15A

(1) *Safe Working Load specification allowing for a substantial safety margin.*

8.2 DIMENSIONS

	Bedframe without extension	Frame with extension (fully extended) (2)
Maximum dimensions (Width x Length) in mm.	1040 x 2180	1040 x 2360

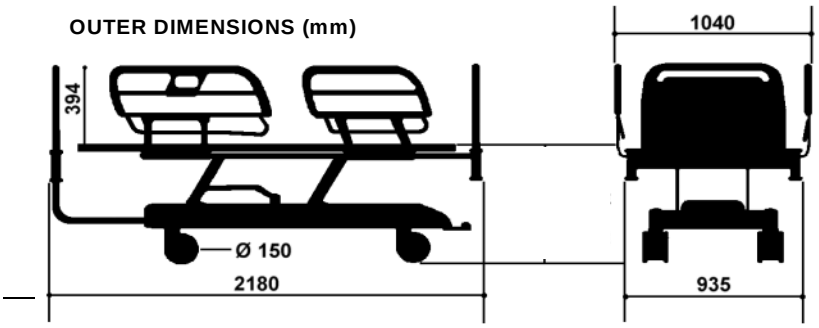
	Single band Ø 150 castors	Complete Ø 150 castors (1)	Double band Ø 150 castors (1)
Minimum height (low position) (mm)	452 *	448 *	440 *
Maximum height (high position) (mm))	792 *	788 *	780 *

** : for a bed equipped with the "Bedside Cabinet Transport" option, add 10mm*

	Head Section	Leg Section	Knee Section	Trend./ Reverse Trend.(1)
Maximum inclination with respect to horizontal	+ 68°	+ 16°	+ 34°	+12°/-12°

***PLEASE NOTE**: These are average values, which may vary according to manufacturing tolerances.*

OUTER DIMENSIONS (mm)



(1) *According to options chosen*

SPECIFICATIONS

9. WARRANTY AND AFTER SALES SERVICE

Warranties for our beds will be rendered null and void, in part or in total, in the event of:

- Unauthorised interference with or incorrect maintenance of:
  - . Actuators
  - . Electrical drives and components
  - . Mechanical systems
- Abnormal use
- Use of parts and accessories not authorised by the manufacturer
- Use of unauthorised cleaning procedures
- Any use, including cleaning and servicing, that does not comply with the instructions in this manual.

10. STANDARDS COMPLIANCE

- NF MEDICAL "Hospital beds" compliant
  Authorisation no.178-01/01.
  Complies with French standards:
  - NF-S-90-312 (1984)
  - EN-60601-1 (1996)
  - EN-60601-1-2 (2001)
  - EN-60601-2-38 (1999)
  - IEC-60601-2-38 Amendment 1 (1999).

CE

- Complies with essential requirements of CE directive 93/42/CEE applicable to class I medical equipment.
- Complies with requirements of CE directive 89/336/CEE applicable to Electromagnetic Counts (CEM) group 1 class B.

Notes :